

Remarks

Reconsideration of this application as amended herein is respectfully requested.

The Examiner has objected to drawings because numeral 144 for the bottom flange of the lower the spar chord 136 does not appear in the drawings. Applicants enclose herewith a corrected sheet no. 8 showing the numeral 144 in Fig. 12.

Claims 68-76 have been withdrawn from consideration and are canceled in this amendment. Claim 85 has been cancelled. The remaining active claims are claims 77-84 and 86-87.

Claim 82 was objected to as depending from a rejected claim. Claim 82 has been amended to incorporate the subject matter of the claims from which it depended. Accordingly, Applicants believe that claim 82 is now in condition for allowance.

Claim 88 has been added to claim the subject matter on claim 82 with the subject matter of claim 77, with some refinements.

Claims 77-81 and 83-86 have been rejected under 35 USC 102 as anticipated by Palmer P/N 2,330,185. Palmer discloses a wing having spars, ribs and wing skins. The Examiner asserts that Palmer discloses coordination features in the form of apertures that extend through the flanges of the spars and ribs to allow for passage of rivets for connection to the wing panels.

Applicants do not find any reference to coordination features in Palmer. Rather, it appears that the rivet holes are made by match-drilling. But even in coordination features were used in Palmer, they are not features as defined in claim 77.

The Examiner recognizes the differences, but he takes the position that the method by which the coordination features - apertures - have been created and their locations ascertained is not given weight in the claims inasmuch as this is a method limitation and the claims recite an article.

Applicants understand that current PTO practice is to disregard "method limitation" in a claim for an article, but only if the "method limitations" do not define structure in the article that helps to distinguish over the prior art. The structure implied by the process steps must be considered when assessing a claim of this nature. Structurally, the wingbox defined in claim 77 has many similarities to the fundamental design of the Palmer wingbox, but the structural differences implied by the process steps in the last paragraph of the claim

constitute a revolutionary change in airplane wing construction. For the first time, wing components can be manufactured so accurately that they can be fit together on a simple jig and conform with such astonishing accuracy to the digital wing product definition that the fit of other components, such as leading edge slats and trailing flaps, is always within tolerance. From a distance, it may look like the same wing design, but structurally is fundamentally different because it conforms to the digital wing product definition in ways that wings made on the old fixed wing fixtures never did. This is not easy to define in a claim because the basic wing design is the same, but the structure is very different in ways that are of utmost importance to the airplane manufacturing business.

Thus, Applicants have defined the invention partially with process steps, but these process steps were selected to define the structure implied by the process steps. The PTO recognizes that process limitations can be used to distinguish an invention over the prior art in patentable fashion, especially where the structural differences in the product can only be defined by the process steps (MPEP 2113). Because of the difficulty of defining the subtle but very important and distinctive structural differences between what could be considered similar wing design basics of the invention and the prior art, Applicants request that the Examiner give consideration to allowing the definition of the invention in the claims of this application using process steps in part to help distinguish the article structurally over the prior art.

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Respectfully submitted,



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